

CLAIMS

1. A solenoid having a cylindrical excitation coil and a plunger movable in the excitation coil, said solenoid being adapted to generate electromagnetic force to move the plunger when an electric current is supplied to the excitation coil,

wherein a cover for closing a side of a plunger compartment accommodating the plunger is provided with upper and lower through-holes communicatively extending through said cover from an outside of the solenoid to the plunger compartment, wherein an uppermost part of the upper through-hole is above or level with an uppermost part of the plunger compartment, and a lowermost part of the lower through-hole is below or level with a lowermost part of the plunger compartment.

2. A hydraulic control valve including a hydraulic control valve body having a spool sliding in a sleeve, and a solenoid having a plunger and an excitation coil for generating magnetic force to move the plunger, said solenoid being attached to the hydraulic control valve body to apply moving force to the spool by movement of the plunger,

wherein a cover for a side of said solenoid at which said solenoid is attached to the hydraulic control valve body is provided with upper and lower through-holes communicating with a plunger compartment accommodating the plunger, wherein an uppermost part of the upper through-hole is above or level with an uppermost part of the

plunger compartment, and a lowermost part of the lower through-hole is below or level with a lowermost part of the plunger compartment, and wherein said hydraulic control valve body has upper and lower vertical holes, said upper vertical hole being provided at a position above the upper through-hole provided in the cover of said solenoid in communication with said upper through-hole, said lower vertical hole being provided at a position below the lower through-hole provided in the cover of said solenoid in communication with said lower through-hole, and said upper vertical hole being in communication with a tank port.